

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**LISTING OF CLAIMS:**

1. (Canceled)
2. (Canceled)
3. (Previously presented)      The apparatus of claim 5 wherein each of said two or more adaptive equalizers comprise a computational resource.
4. (Previously presented)      The apparatus of claim 3 wherein the computation resource comprises at least one item selected from the group consisting of: a summer, a conjugation block, a multiplier, and a divider.
5. (Previously presented)      An apparatus, comprising:
  - two or more adaptive equalizers;
  - a plurality of operation blocks that interconnect the adaptive equalizers;
  - a first control mechanism that configures the adaptive equalizers and the plurality of operational blocks according to different signal delay profiles;
  - a second control mechanism that disables at least one of said plurality of operational blocks according to the different signal delay profiles; and
  - a third control mechanism that disables a computation resource of at least one of said adaptive equalizers according to the different delay profiles.

6. (Previously presented) The apparatus of claim 5 wherein said operational blocks comprise at least one item selected from the group consisting of:

- a signal regenerator;
- a delay line; and
- a summer.

7. (Previously presented) The apparatus of claim 5 wherein the different signal delay profiles comprise at least one multi-path signal profile selected from the group consisting of:

- sub-signals that arrive to the apparatus in consecutive chip time units;
- sub-signals wherein one sub-signal comprises a substantial amount of total energy of the sub-signals;
- sub-signals that do not arrive to the apparatus in consecutive chip time units;
- sub-signals that arrive to the apparatus in two or more clusters;
- sub-signals that arrive to the apparatus from more than one antenna.

8. (Previously presented) An apparatus, comprising:

- two or more adaptive equalizers;
- a plurality of operation blocks that interconnect the adaptive equalizers;
- a first control mechanism that configures the adaptive equalizers and the plurality of operational blocks according to different signal delay profiles;

- a second control mechanism that disables at least one of said plurality of operational blocks according to the different signal delay profiles; and

- a third control mechanism that disables a computation resource of at least one of said adaptive equalizers according to the different delay profiles, the first, second, and third control mechanisms comprise multiplexers that receive control signal according to the different delay profiles.

9. (Previously presented) The apparatus of claim 5 wherein a two-stage configuration of the apparatus comprises a default mode.

10. (Canceled)

11. (Canceled)

12. (Previously presented) The method of claim 13 wherein determining attributes of the multi-path signal profile comprises determining a number of antennas at a transmitter, and determining a delay length of the multi-path signal profile if said number of antennas is equal to one.

13. (Previously presented) A method, comprising:  
receiving a multi-path signal profile;  
determining attributes of the multi-path signal profile, comprising determining an amount of energy in a single sub-signal of the multi-path profile if the length of the multi-path signal profile is less than a maximum number of taps of a single adaptive equalizer; and  
operating two or more adaptive equalizers, computational resources of the two or more adaptive equalizers, and operational blocks interconnecting said two or more adaptive equalizers according to said attributes of the multi-path signal profile.

14. (Previously presented) The method of claim 13 wherein determining attributes of the multi-path signal profile comprises determining an amount of energy capturable by a two-stage adaptive equalizer if said length of the multi-path signal profile requires more than the maximum number of taps of a single adaptive equalizer.

15. (Previously presented) The method of claim 14 wherein determining attributes of the signal comprises determining a number of energy clusters of the multi-path

signal profile if the amount of energy capturable by a two-stage adaptive equalizer is less than around ninety-five percent of total energy of the multi-path signal profile.

16. (Previously presented) The method of claim 13 further comprising disabling at least one selected from the group:

- adaptive equalizer;
- operational block; and
- computational resource.

17. (Canceled)

18. (Previously presented) A system comprising:

- two or more adaptive equalizers;
- a plurality of operational blocks;
- a means for selectively interconnecting the two or more adaptive equalizers and the plurality of operational blocks according to the attributes of a signal profile; and
- a means for disabling a computation resource of at least one of the two or more adaptive equalizers according to said attributes of the signal profile, the means for selectively interconnecting and the means for disabling comprising a plurality of multiplexers.

19. (Previously presented) The system of claim 18 further comprising means for disabling at least one of the plurality of operational blocks according to said attributes of the signal profile.

20. (Canceled)

21. (Previously presented) The system of claim 18, further comprising means for sharing computational resources of the two or more adaptive equalizers.

22. (Previously presented) The system of claim 18, wherein the attributes of the signal profile comprise at least one selected from the group consisting of:

- a number of antennas that transmitted the multi-path signal;
- a length of the multi-path signal profile;
- an amount of energy in a single sub-signal of the multi-path signal;
- an amount of capturable energy by a number of adaptive equalizers; and
- a number of energy clusters.